

Mechanical Specifications

External Dimension	1762 x 1134 x 30 mm
Weight	24.9 kg
Solar Cells	TOPCon 182 x 105mm (96pcs)
Front / Back Glass	2.0mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm ² , 250mm(+)/350mm(-) or Customized Length
Connector	Genuine MC4 EVO2/Zerun Z4S-abcde/QC Solar QC4.10-cds
Fire Safety Class	Class A
Safety Class Protection	Class II

Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	6	24
Pieces per Container	216	864

Electrical Characteristics

Module Type	MPS-440NBBK			MPS-455NBBK			MPS-450NBBK			MPS-455NBBK		
	Front STC	Front BNPI	Back STC	Front STC	Front BNPI	Back STC	Front STC	Front BNPI	Back STC	Front STC	Front BNPI	Back STC
Maximum Power P_{mp} (W)	440	488	352	445	493	356	450	499	360	455	504	364
Open Circuit Voltage $-V_{oc}$ (V)	35.38	35.46	35.36	35.58	35.66	35.56	35.78	35.86	35.76	35.98	36.06	35.96
Short Circuit Current $-I_{sc}$ (A)	15.80	17.51	12.64	15.85	17.56	12.68	15.90	17.62	12.72	15.95	17.67	12.76
Maximum Power Voltage $-V_{mp}$ (V)	29.41	29.49	29.39	29.61	29.69	29.59	29.81	29.89	29.79	30.01	30.09	29.99
Maximum Power Current $-I_{mp}$ (A)	14.97	16.53	11.98	15.03	16.61	12.03	15.10	16.68	12.08	15.17	16.75	12.14
Module Efficiency STC- η_m (%)	22.02			22.27			22.52			22.77		
Power Tolerance (W)	-5W~+5W											
Pmax Temperature Coefficient	-0.29 %/°C											
Voc Temperature Coefficient	-0.25 %/°C											
Isc Temperature Coefficient	+0.046 %/°C											

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5 Power measurement tolerance: +/-3%; Voltage measurement tolerance: +/-3%; Current measurement tolerance: +/-4%
 BNPI: front 1000 W/m² rear 135 W/m² Power measurement tolerance: +/-3%; Voltage measurement tolerance: +/-3%; Current measurement tolerance: +/-3%
 Bifaciality coefficient: $\square V_{oc} \pm 5\%$: 0.99, $\square I_{sc} \pm 10\%$: 0.8, $\square P_{max} \pm 10\%$: 0.8

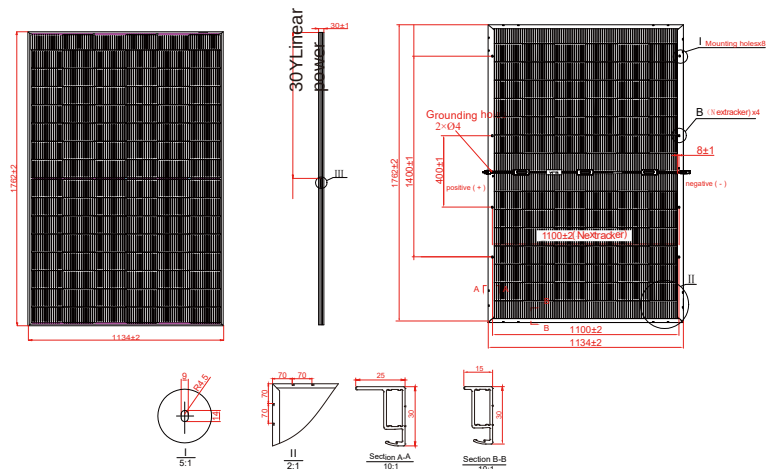
Rear Side Power Gain(MPS-450NBBK)

Power Gain	10%	15%	20%	25%	30%
Maximum Power $-P_{mp}$ (W)	495	518	540	563	585
Open Circuit Voltage $-V_{oc}$ (V)	35.78	35.78	35.78	35.78	35.78
Short Circuit Current $-I_{sc}$ (A)	17.49	18.29	19.08	19.88	20.67
Maximum Power Voltage $-V_{mp}$ (V)	29.81	29.81	29.81	29.81	29.81
Maximum Power Current $-I_{mp}$ (A)	16.61	17.37	18.12	18.88	19.63

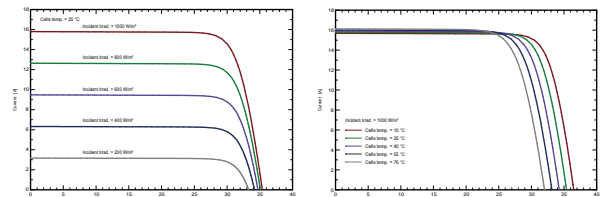
Application Conditions

Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30 A
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature	45±2 °C
Bifaciality	80%±5%
Mechanical Load	Front side 5400 Pa / Back side 2400 Pa

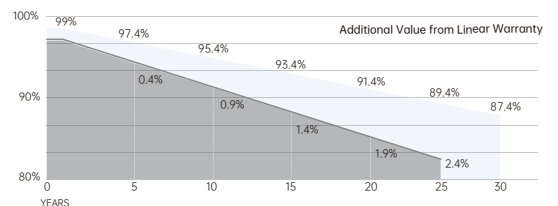
Technical drawing



I-V Curve



WARRANTY



30Y- Guarantee on product material and workmanship

30Y- Linear power output warranty